APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,476	04/25/2000	Bruce V. Schwartz	03399.P026	8797

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EXAMINER
SMITH, PETER J

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)	
Office Action Summary	09/558,476		SCHWARTZ, BRUCE V.	
	Examiner		Art Unit	
	Peter J Smith		2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2000*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,23-29 and 52-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17,23-29 and 52-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: amendment filed 2/9/2004, application

filed on 04/25/2000, IDS filed on 02/18/2002.

2.   Claims 1-17, 23-29 and 52-56 are pending in the case. Claims 1, 7, 10, 13, 23, and 54 are

independent claims.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   **Claims 1-15, 23-29, and 52-56 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Kumhyr, US 6,493,735 B1 filed 12/15/1998 in view of Ng, US 5,812,122

published 09/22/1998.

Regarding independent claims 1, 7, 10, and 13, Kumhyr teaches receiving a line of

text, the line of text having a set of ordered characters in col. 2 lines 56-61. Kumhyr teaches left-

to-right and right-to-left bi-directional lettering in col. 2 line 56 – col. 3 line 14. Kumhyr teaches

identifying a set of strings, which groups of adjacent characters that share a characteristic which

distinguishes the adjacent characters from other characters in a line of text in fig. 4 and the

abstract. Kumhyr also teaches individual strings of characters which can use either a left-to-right

version or a flipped right-to-left version for a group of adjacent characters.

Kumhyr does not teach flipping characters around a particular axis or flipping a group of adjacent characters about a vertical axis which passes through the group of adjacent characters. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

Regarding dependent claims 2, 8, 11, and 14, Kumhyr teaches receiving a block of text in fig. 4 and col. 8 lines 3-6. Kumhyr teaches breaking up the block of text into a set of lines of text, which could be individual strings of text in col. 2 lines 56-64 and col. 8 lines 3-6. Kumhyr teaches performing the receiving the line of text, flipping the group of adjacent characters of the line from left-to-right to right to left if necessary, and identifying and flipping the character of the runs, or strings, for each line of text of the set of lines of text in col. 2 line 56 – col. 3 line 14 and the abstract.

Regarding dependent claim 3, Kumhyr teaches displaying the line of text on the display device after flipping the group of adjacent characters in fig. 4 and col. 7 line 66 – col. 8 line 3.

Regarding dependent claims 9, 12, and 15, Kumhyr teaches passing the line of text to a native operating system for display in fig. 4 and col. 7 line 66 – col. 8 line 3.

Regarding dependent claim 4, Kumhyr teaches receiving the line of text from an application with no capability of handling bi-directional text in the abstract.

Regarding dependent claim 5, Kumhyr teaches a group of adjacent characters which are in a language which is normally read in a left-to-right fashion.

Regarding dependent claim 6, Kumhyr teaches a group of adjacent characters which are in a language which is normally read in a right-to-left fashion.

Regarding independent claim 23, Kumhyr teaches receiving a line of text, the line of text having a set of ordered characters in col. 2 lines 56-61. Kumhyr teaches generating a set of runs within the line of text in fig. 4 and the abstract. Kumhyr teaches left-to-right and right-to-left bi-directional lettering for allowing bi-directional flipped text in col. 2 line 56 – col. 3 line 14. Kumhyr teaches identifying a set of runs of foreign characters within the line of text in fig. 4 and the abstract.

Kumhyr does not teach flipping characters around a particular axis or flipping a group of adjacent characters about a vertical axis which passes through the group of adjacent characters. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

Regarding dependent claim 24, Kumhyr teaches flipping, using its alternate field, the orientation of each run, or string, or foreign characters within a run of foreign characters in fig. 4 and the col. 2 line 46 – col. 3 line 14.

Kumhyr does not teach flipping characters around a particular axis or flipping a group of adjacent characters about a vertical axis which passes through the group of adjacent characters. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

Regarding dependent claim 25, Kumhyr teaches bi-directional text display including rendering each run of the set of runs, except for the runs of foreign characters, in a first orientation and rendering each run of foreign characters in a second orientation in the abstract.

Regarding dependent claim 26, Kumhyr teaches receiving a block of text having a set of ordered characters and a location in fig. 4 and col. 8 lines 3-6. Kumhyr teaches breaking a block of text into a set of lines of text, each line having a set of ordered characters and a location in col. 2 lines 56-64 and col. 8 lines 3-6.

Regarding dependent claim 27, Kumhyr teaches received text from an application with no capability of handling bi-directional text in the abstract.

Regarding dependent claim 28, Kumhyr teaches a group of adjacent characters which are in a language which is normally read in a left-to-right fashion.

Regarding dependent claim 29, Kumhyr teaches a group of adjacent characters which are in a language which is normally read in a right-to-left fashion.

Regarding dependent claim 52, Kumhyr does not teach a center vertical axis of a display on which a line of text is to be displayed for flipping the text. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

Regarding dependent claim 53, Kumhyr teaches a left/right directionality characteristic of a group of adjacent characters in col. 2 line 56 – col. 3 line 14.

Regarding independent claim 54, Kumhyr teaches receiving a block of text including a plurality of lines of text, each line including a plurality of ordered characters in col. 2 lines 56-61. Kumhyr teaches breaking up the block of text into a plurality of lines of text, which could be individual strings of text in col. 2 lines 56-64 and col. 8 lines 3-6. Kumhyr teaches left-to-right and right-to-left bi-directional lettering in col. 2 line 56 – col. 3 line 14. Kumhyr teaches, for each line of text, determining a set of runs of characters within the line of text, including identifying left-right characteristics of each of the runs of characters in fig. 4 and the abstract.

Kumhyr also teaches individual strings of characters which can use either a left-to-right version or a flipped right-to-left version for a group of adjacent characters.

Kumhyr does not teach flipping characters around a particular axis or flipping a run of characters about a vertical axis which passes through the run of adjacent characters. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

Regarding dependent claim 55, Kumhyr does not teach identifying any runs of foreign characters which span two lines in the block of text and splitting each run of foreign characters which spans two lines in the block of text into two strings, one string on each of the two lines. It is clear that one of ordinary skill in the art at the time of the invention would have modified Kumhyr in view of Ng to have created the claimed invention. It would have been obvious and desirable to have divided a run spanning two lines into a separate run on each line because the flipping of the run on two lines could not have worked. It would have been obvious to one of ordinary skill in the art at the time of the invention to have flipped each line of the run individually in order to make the flipping feature work.

Regarding dependent claim 56, Kumhyr teaches left-to-right and right-to-left bi-directional lettering in col. 2 line 56 – col. 3 line 14. Kumhyr teaches flipping a run of

characters, which has a different left-right characteristic than surrounding characters in fig. 4, col. 2 line 56 – col. 3 line 14, col. 8 lines 3-6, and the abstract. Kumhyr does not teach flipping characters around a particular axis or flipping a run of characters about a vertical axis which passes through the run of adjacent characters. Ng teaches swapping bi-directional text in a graphical user interface, which would result in a flipping of the characters about a center axis in fig. 3, 4 , col. 1 lines 58-67, and col. 5 lines 43-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ng into Kumhyr to create the claimed invention. It would have been obvious and desirable to have incorporated the user selectable transforming and swapping which would have resulted in a flipping about a center axis taught by Ng into the bi-directional display of Kumhyr to increase the capability of integrating left-to-right and right-to-left text in the same document.

5.   Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumhyr, US 6,493,735 B1 filed 12/15/1998 in view of Ng, US 5,812,122 published 09/22/1998 as applied to claims 40 and 46 above, and further in view of Wright, Jr. et al. (hereafter referred to as Wright), US 5,857,201 published 01/05/1999.

Regarding dependent claim 16, Kumhyr does not teach a client which is a remote mobile device. Wright does teach client which is a remote mobile device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Wright into Kumhyr to create the claimed invention. It would have been obvious and desirable to have remote mobile clients for displaying bi-directional text so users of the device could use

the device as a translator to communicate with foreign language speaking people the user could

have come into contact with.

Regarding dependent claim 17, Kumhyr does not teach a client which is a wireless

device. Wright does teach client which is a wireless device. It would have been obvious to one

of ordinary skill in the art at the time the invention was made to have combined Wright into

Kumhyr to create the claimed invention. It would have been obvious and desirable to have

wireless clients for displaying bi-directional text so users of the device could use the device as a

translator to communicate with foreign language speaking people the user could have come into

contact with.

Response to Arguments

Applicant's arguments filed 2/9/2004 have been fully considered but they are not

persuasive. Regarding Applicant's argument on page 11 that neither Kumhyr nor Ng discloses

or teaches flipping characters about a display axis, the Examiner agrees that some of the

embodiments of flipping as described in the specification may not be taught by Kumhyr or Ng.

However, the Examiner believes that flipping about an axis within a run of foreign characters as

claimed is not patentably distinguishable in all forms from the directionality reordering taught by

Ng. In Applicant's specification page 8 line 17 – page 9 line 3, the Examiner notes that the

flipping action described includes reversing or flipping the line of text about a center vertical

axis wherein "no change has been made to the orientation of each individual character, rather the

relative locations of the various characters have been rearranged." The Examiner believes that

the combination of flipping text about a center axis only to change the relative locations of the

various characters is essentially identical to the reordering taught by Ng and even using the

reverse character string taught by Kumhyr. Therefore, the Examiner believes flipping about a

display axis, as claimed, is not distinguished from the prior art of record.

Regarding Applicant's argument on page 12 that neither Kumhyr nor Ng teaches flipping

a group of adjacent characters about a display axis which passes through the group of adjacent

characters, the Examiner believes that the Kumhyr and Ng do teach this claimed limitation in

view of previous argument and the fact that Kumhyr teaches individual text strings which may

be displayed with either directionality and the ability of Ng to reorder individual groups of

adjacent characters. The Examiner believes that the combination of these features would have

lead one of ordinary skill in the art at the time of the invention to have rendered the claimed

invention obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The

examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
April 15, 2004

SANJIV SHAH
PRIMARY EXAMINER